

Claims

1. through 26. (Cancelled)

27. (Currently amended) A method of distributing polyphase alternating current power through a power distribution apparatus comprising a polyphase power input, a plurality of polyphase power outputs, and a plurality of power information visual displays ~~monitors~~ disposed in the power distribution apparatus, comprising:

with at least a first of the plurality of polyphase power outputs, distributing a first power phase received by the polyphase power input;

with at least a second of the plurality of polyphase power outputs, distributing a second power phase received by the polyphase power input; and

with at least one of the plurality of power information visual displays ~~monitors~~ disposed in the power distribution apparatus, reporting power information regarding the first power phase distributed by the at least a first of the plurality of polyphase power outputs.

28. (Currently amended) The method of claim 27, further comprising, with at least a second of the plurality of power information visual displays ~~monitors~~, reporting power information regarding the second power phase distributed by the at least a second of the plurality of polyphase power outputs.

29. (Original) The method of claim 27, wherein the reporting power information regarding the first power phase comprises determining current of the first power phase.

30. (Original) The method of claim 27, wherein the reporting power information regarding the second power phase comprises determining current of the second power phase.

31. (Original) The method of claim 27, further comprising, with at least a third of the plurality of polyphase power outputs, distributing a third power phase received by the polyphase power input.

32. (Currently amended) The method of claim 31, further comprising, with at least a third of the plurality of power information visual displays ~~monitors~~, reporting power information regarding the third power phase distributed by the at least a third of the plurality of polyphase power outputs.

33. (Original) The method of claim 32, wherein the reporting power information regarding the third power phase comprises determining current of the third power phase.

34. (Currently amended) The method of claim 27, further comprising, with at least one of the plurality of power information visual displays ~~monitors~~, providing a sensory alarm, whereby a human in the vicinity of the power distribution apparatus may receive sensory stimulation from the sensory alarm.

35. (Currently amended) A method of polyphase power distribution through a three-phase delta power distribution and monitoring apparatus comprising a plurality of input lines, a power ground, a plurality of power supplies, a plurality of output plug receptacles, and a digital visual display module disposed in the three-phase delta power distribution and monitoring apparatus, the method comprising:

transmitting through each of the plurality power supplies phase power from at least one of the plurality of input lines and to at least one of the plurality of output plug receptacles;

sensing in each of the plurality of power supplies a magnitude of the phase power flowing through the power supply;

converting in each of the plurality of power supplies the magnitude of the phase power into an analog signal representing the magnitude of the phase power; and

transmitting the analog signal to the digital visual display module disposed in the three-phase delta power distribution and monitoring apparatus.

36. (Original) The method of claim 35, further comprising generating an alarm when the analog signal meets at least one specified criteria.

37. (Original) The method of claim 36, wherein generating an alarm comprises generating an audible alarm that can be heard by a user within the vicinity of the three-phase delta power distribution and monitoring apparatus.

38. (Original) The method of claim 35, further comprising converting in each of the plurality of power supplies alternating current to direct current.

39. (Original) The method of claim 35, wherein the sensing comprises using a current-sensing transducer.

40. (Original) The method of claim 39, further comprising converting an analog output from the current-sensing transducer to a digital output.

41. (Currently amended) A method of polyphase power distribution through a three-phase wye power distribution and monitoring apparatus comprising a plurality of input lines, a neutral line, a ground line, a plurality of power supplies, a neutral power supply, a plurality of output plug receptacles, and a plurality of digital visual display modules disposed in the three-phase wye power distribution and monitoring apparatus, the method comprising:

transmitting through each of the plurality power supplies and the neutral power supply phase power from at least one of the plurality of input lines and to at least one of the plurality of output plug receptacles;

sensing in each of the plurality of power supplies a magnitude of the phase power flowing through the power supply;

sensing in the neutral power supply a magnitude of the phase power flowing through the neutral power supply;

converting in the neutral power supply the magnitude of a total current in the neutral line into an analog signal representing the magnitude of the total current in the neutral line; and

transmitting the analog signal to one of the plurality of digital visual display modules disposed in the three-phase wye power distribution and monitoring apparatus.

42. (Original) The method of claim 41, further comprising generating an alarm when the analog signal meets at least one specified criteria.

43. (Original) The method of claim 42, wherein generating an alarm comprises generating an audible alarm that can be heard by a user within the vicinity of the three-phase delta power distribution and monitoring apparatus.

44. (Original) The method of claim 41, further comprising converting in the neutral power supply alternating current to direct current.

45. (Original) The method of claim 41, wherein the sensing comprises using a current-sensing transducer.

46. (Original) The method of claim 45, further comprising converting an analog output from the current-sensing transducer to a digital output.